

Claims;

1. A toner for developing an electrostatic image comprising a resin and a colorant in which an arithmetic average of shape coefficient SF-1 of the toner particles calculated by Equation 1 is from 125 to 170 and a ratio of that to an arithmetic average of the shape coefficient SF-2 of the toner particles calculated by Equation 2, SF-1/SF-2, is from 1.10 to 1.52 and the ratio of the toner particles having a circle corresponding diameter measured by a flow particle image analyzer of from not less than 0.60 to less than 1.00 μm is not more than 5.0% in number.

Formula (1)

$$\text{SF-1} = \frac{(\text{Maximum diameter of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100\pi}{4}$$

Formula (2)

$$\text{SF-2} = \frac{(\text{Circumference of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100}{4\pi}$$

2. A production method of a toner comprising a step for fused resin particles in an aqueous medium in which an arithmetic average of the shape coefficient SF-1 of the toner particles calculated by Equation 1 is from 125 to 170 and a ratio of that to an arithmetic average of the shape

10056577-012402

SUB
B1

coefficient SF-2 of the toner particles calculated by Equation 2, SF-1/SF-2, is from 1.10 to 1.52 and the ratio of the toner particles having a circle corresponding diameter measured by a flow particle image analyzer of from not less than 0.60 to less than 1.00 μm is not more than 5.0% in number.

Formula (1)

$$\text{SF}-1 = \frac{(\text{Maximum diameter of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100\pi}{4}$$

Formula (2)

$$\text{SF}-2 = \frac{(\text{Circumference of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100}{4\pi}$$

3. An image forming method comprising developing an electrostatic latent image formed on a photoreceptor by a toner for developing a electrostatic image by the developer containing colored particle comprising a resin and a colorant and an external additive, by facing the static latent image to a layer of a developer comprising a single-component static image developing toner formed on a developer conveying member so as to touch with together, in which an arithmetic average of the shape coefficient SF-1 of the toner particles calculated by Equation 1 is from 125 to 170 and a ratio of

10056577-012402

that to an arithmetic average of the shape coefficient SF-2 of the toner particles calculated by Equation 2, SF-1/SF-2, is from 1.10 to 1.52 and the ratio of the toner particles having a circle corresponding diameter measured by a flow particle image analyzer of from not less than 0.60 to less than 1.00 μm is not more than 5.0% in number.

Formula (1)

$$\text{SF-1} = \frac{(\text{Maximum diameter of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100\pi}{4}$$

Formula (2)

$$\text{SF-2} = \frac{(\text{Circumference of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100}{4\pi}$$

4. An image forming method comprising a developing step for developing a static latent image formed on a photoreceptor by an static image developer comprising a colorant particle comprising a resin and a colorant and an external additive, the step for transferring the toner to an image receiving material, the step of removing the toner remained on the photoreceptor by a cleaning member and the step for recycling the toner removed from the photoreceptor to the developing step, in which an arithmetic average of the shape coefficient SF-1 of the colored particles calculated by

202420 4455001 10056577 012402

Equation 1 is from 125 to 170 and a ratio of that to an arithmetic average of the shape coefficient SF-2 of the toner particles calculated by Equation 2, SF-1/SF-2, is from 1.10 to 1.52 and the ratio of the toner particles having a circle corresponding diameter measured by a flow particle image analyzer of from not less than 0.60 to less than 1.00 μm is not more than 5.0% in number.

Formula (1)

$$\text{SF-1} = \frac{(\text{Maximum diameter of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100\pi}{4}$$

Formula (2)

$$\text{SF-2} = \frac{(\text{Circumference of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100}{4\pi}$$

5. An image forming method comprising a step for developing an electrostatic image formed on a photoreceptor by a double-component developer comprising a carrier and a toner, in which an arithmetic average of the shape coefficient SF-1 of the colored particles calculated by Equation 1 is from 125 to 170 and a ratio of that to an arithmetic average of the shape coefficient SF-2 of the toner particles calculated by Equation 2, SF-1/SF-2, is from 1.10 to 1.52 and the ratio of the toner particles having a circle

10056577.012402

corresponding diameter measured by a flow particle image analyzer of from not less than 0.60 to less than 1.00 μm is not more than 5.0% in number.

Formula (1)

$$\text{SF}-1 = \frac{(\text{Maximum diameter of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100\pi}{4}$$

Formula (2)

$$\text{SF}-2 = \frac{(\text{Circumference of toner particle})^2}{(\text{Projection area of toner})} \times \frac{100}{4\pi}$$

10056577-012402

Add
#1